

CLAIMS

1. A radio device testing system comprising:
at least one radio device (16) having a software radio stack (40) through
5 which radio messages comprising data are processed in accordance with a
predetermined radio protocol, and
test control means (10) for controlling and monitoring the testing of said
at least one radio device via a link (30) therebetween,
characterised in that
10 perturbation means (38) linked to said stack and to said control means
is provided and where, under control of said test control means, said stack
perturbation means perturbs an aspect of said radio stack processing.
2. A testing system according to claim 1, wherein said radio stack (40)
15 comprises a plurality of logical layers through which said radio messages are
processed, and wherein said perturbation means (38) is linked to at least one
of said layers in said stack.
3. A testing system according to claim 2, wherein said perturbation aspect
20 of said radio stack processing comprises said perturbation means altering a
layer operation to perturb said data en route through said linked layer.
4. A testing system according to claim 2 or claim 3, wherein said
perturbation aspect of said radio stack processing comprises said perturbation
25 means altering said data of a message en route through said layer.
5. A testing system according to any preceding claim, further comprising
storage means (20) for receiving and storing test data from said test control
means (10) and perturbation means in a central data file.
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6. A testing system according to any preceding claim, further comprising
radio message monitoring means (84) for intercepting over the air radio

messages and supplying said message data to said test control means via a link therebetween.

7. A testing system according to any preceding claim, wherein said test
5 and control means comprises a distributed system of client computers (72, 74, 76) under the control of a server computer (70), each client being linked (30) to at least one radio device (16) and respective perturbing means (38), the radio devices linked to said clients thereby forming a radio network and wherein said server computer synchronises and controls perturbation, testing and
10 monitoring of said radio network.

8. A testing system according to claim 6 and claim 7, further comprising an interruptible power supply (80) for supplying power to the radio devices under test.

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9. A testing system according to claim 8, wherein said power supply is interruptible under control of said radio monitoring means and said server computer (70).

20 10. A testing system according to any preceding claim, further comprising analysis means (86) for automatically analysing said data stored in said central data file.

11. A method of testing a radio device (16) in a testing system comprising
25 at least one radio device having a software radio stack through which radio messages (46) comprising data are processed in accordance with a predetermined radio protocol, test control means (10, 70) for controlling and monitoring the testing of said at least one radio device via a link therebetween, and perturbation means (38) linked to said stack and to said control means,
30 wherein said method comprises:

said test control means providing data for inclusion in messages to said perturbation means,

said perturbation means perturbing an aspect of said radio stack processing in dependence on said message data, and
providing response data from said stack to said test control means.

5 12. A method according to claim 11, further comprising analysing said response data.

13. A method according to claim 12, wherein over the air radio messages are monitored by radio message monitoring means (84), and further provided
10 to said test control means for analysis together with said stack response data.

14. A method according to claim 12, wherein the power supplied to said radio device by an interruptible power supply is interrupted under control of radio message monitoring means.

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15. Program code which when run on a testing computer (10) causes said computer to carry out any of the methods as claimed in claims 11 to 14.

16. A program code carrier carrying program code which when executed on
20 a testing computer (10) cause said computer to carry out any of the methods as claimed in claims 11 to 14.